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# DK 7979.502 PDU metered plus

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## DK 7979.502 - PDU metered plus

High-end IT rack power distribution: Smart PDU with energy measurement per slot, i.e. output requirement for each individual consumer.







#### **Features**

Model No.	DK 7979.502
Design	482.6 mm (19") version
Product description	High-end power distribution in a compact design for IT network and server racks. With power measurement per individual outgoing slot.
Benefits	For vertical mounting, it may be attached in the zero-U space of the Rittal VX IT or TS IT rack with no need for tools Colour coding of phases and fuse circuits (L1=pink, L2=black, L3=white) Tool-free divider kit for VX IT PDU self-supplied, no external power supply required Measurement accuracy ± 1% (kWh) to EN 62 053-21 Integral real-time clock with battery buffering (max. 10 years, battery replaceable) Integral electromagnetic buzzer for acoustic alarms Adjustable limit values (warning/alarm) for current, voltage, output, individual settings for each output slot Power-saving design, minimal intrinsic power consumption

### **Features**

Technical specifications	Display/controller unit in the PDU enclosure rotatable through 180° and replaceable Integral, fully-redundant power pack, power supply from all phases Error-tolerant PDU power supply redundant across all phases Voltage V, current A, frequency Hz Active power, active energy, apparent power, apparent energy Power factor (cosPhi) and phase angle Zero conductor current measurement/load imbalance detection Fuse monitoring for PDUs with integral fuse Bright TFT display, 128 x 128 pixels (RGB) with back-lighting and energy-saving mode to display output data and basic PDU configuration Position sensors for display rotation and correct PDU representation on the website Multi-colour LEDs (green/amber/red) to indicate switching states and limits per individual output slot Power LED to indicate voltage
Material	Aluminium section, black anodised Slots: Plastic
Supply includes	Assembly parts  No connection cable, to be provided by the customer.
Options	CMC III CAN bus sensors may be connected for ambient monitoring, max. 16 sensors
Measurement functions, description	Measurement per phase or infeed Plus measurement per output slot Powerful CPU (ARM Cortex A8) Digital input (floating contact) Additional alarm output/relay output (changeover contact)
Dimensions	Height: 44 mm Depth: 144 mm Length: 450 mm
No. of sockets and type	6 x C13
Sockets	6 x C 13
Rated operating voltage	230 V (AC)
Rated current (max.)	16 A
Power consumption	3.7 kW

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#### **Features**

Infeeds	Qty.: 1 Phases per infeed: 1~
Type of electrical connection	C20
Interfaces	USB 2.0 port (USB-A) for mass configuration, firmware updates & data logging CAN bus interface (RJ 45) for a maximum of 16 ambient sensors Serial interface RS232 (RJ12) for LTE unit, scripting, CLI Use of own certificates/TLS 1.2 E-mail forwarding in case of alarm (SMTP) User administration including rights management LDAP(S)/Radius/Active Directory connection Syslog server connection (max. 2 servers) Fully redundant Ethernet interface 10/100/1000 Mbit/s
Directives	EMC Directive 2014/30/EU Low Voltage Directive 2014/35/EU
Standards	EN 62368-1 EN 61000-3 EN 61000-4 EN 61000-6 EN 62053-21
Protocols	Web server (HTTP, HTTPS, SSL) SSH, Telnet, NTP TCP/IP v4 & v6, DHCP, DNS SNMP v1, v2c & v3, Modbus/TCP, OPC-UA MIB for linking into 3rd party DCIM software FTP/SFTP (update/file transfer)
Operating temperature range	5 °C50 °C
Ambient humidity (non-condensing)	1095 %
Storage temperature range	-20 °C70 °C
To fit	Enclosure type: VX IT enclosure frame: ≥ 800 mm Enclosure type: VX IT 19" mounting angles: ≥ 800 mm
Packs of	1 pc(s).
Customs tariff number	85369095
EAN	4028177948266

#### Features

E-Number Sweden	E8407092
ETIM 9	EC002762
ETIM 8	EC002762
ECLASS 8.0	27142604

# **Approvals**

Approvals	TÜV
Explanations	Declaration of conformity

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#### Tender text

Compact power distributor for deployment in IT server and network enclosures. Robust aluminium housing with permanently mounted output slots, IEC 60320/C13 or IEC 60320/C19 as well as CEE 7/3 (earthing-pin) and BS 1363 (UK), depending on the type (see below for details). The IEC C13 / C19 output slots can be protected with a lock against unintentional removal of the connectors. Unused slots can be closed with slot covers available as accessories. This precludes an unintentional overloading of individual phases an circuits. The fuse circuits and phases are colour-coded for multiphase PDU variants. A connection cable with IEC C20 or CEE connector appropriate for the variant makes the PDU available for immediate deployment.

The PDU metered plus has extensive measurement functions for the current and power monitoring of each output slot The integral TFT colour display enables the basic configuration setting and quick access to to the electrical consumption data. Two Gigabit network interfaces and the integrated Web server allo remote access and data transmission using various protocols The consumption parameter can be

SNMP, OPC-UA, Modbus/TCP. For monitoring the ambient parameters, up to 16 sensors (for example temperature / humidity / smoke / leakage / access) as well as VX IT and TS IT handle systems from the CMC accessories program can be connected to the CAN sensor interface The warranty for proper operation is 24 months.

Technical specifications metered plus

Input voltage range (L/N/PE): 230 VAC, 50-60Hz

input current: 16A No. of phases: 1

Marking of phases (3-phase PDU only L1, L2, L3):

Rittal Power Pink, black, white

Number of slots type IEC 60320/C13 (total): 6

Number of slots type IEC 60320/C13

(per phase/fuse): 6

Number of slots type IEC 60320/C19 (total): -

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Number of slots type IEC 60320/C19

(per phase/fuse): -

Number of slots type CEE 7/3: -

Number of slots type CEE 7/3: -

No. of circuit brakers: -

Hydraulic-magnetic protective circuit-breaker: 16 A

Connector PDU input: EN 60320 / IEC 20

PDU housing width: 450mm PDU housing depth: 144mm

PDU housing height: 44mm (1HU)

PDU Material: Aluminium, eloxiert in RAL 9005 (schwarz)<(>,<)>

other colours available on request

PDU mounting adaptor (VX IT / TS IT) -Mounting options:

Frame + Zero-U space + cable route

Measurement functions: Measurement per output slot

Values recorded (per output slot): Voltage (V) current (A), frequency (HZ), active power (kW),+

active energy (kWh), apparent energy (kWAh)<(>,<)>

apparent power (kVA), reactive power (var), power factor

THD (voltage and current) for 3 phases,

Crest factor for single-phase,

Neutral conductor current measurement

fuse monitoring (at 32 A)

Optional: Residual current monitoring (RCM): RCM Typ B

max. 6 measurement points per PDU possible,

(input / per phase / per fuse)<(>,<)>

0 mA - 100 mA je RCM

Voltage measuring range: 90V - 255V

Voltage resolution 0.1V

Current measuring range 0 - 16A/32A

Current resolution 0.1A

Measuring accuracy typ. ± 1% according to IEC/EN 62 053-21

Freely adjustable limit values (warning/alarm) for

for voltage, current, power: Yes Controllerboard: can be rotated and replaced during operation Display: TFT, RGB 128x128 pixels

Network interface: 2x RJ45, je 10/100/1000 MBit/s

Supported protocols: IPv4 / IPv6<(>,<)>

integral web server, HTTP, HTTPS,

SSL, SSH, NTP, Telnet, TCP/IP v4 und v6, DHCP, DNS<(>,<)>

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NTP, Syslog, SNMP v1, v2c und v3, Traps, OPC-UA,

Modbus/TCP, FTP/SFTP (update/file transfer),

E-mail forwarding (SMTP)

User administration including rights management: Yes

LDAP(S)/Radius connection: Yes

USB port for firmware update

and data logging functions: Yes

Initial commissioning / mass configuration:

yes, with predefined CSV file

CAN bus interface: RJ45, for connecting 16 sensors

CAN sensor types: Temperature, temperature/humidity<(>,<)>

infrared access sensor, leakage, airflow

EFD, NH measurement module, smoke alarm, vandalism

differential pressure, VX IT / TS IT handle system

Plug & play drivers - Rittal RiZone DCIM software: Yes

Digital input: 1

Alarm relay: 48 V DC/2 A

Acoustic signal encoder

Serial interface:

RS232 (e.g. for LTE unit 7030.571)

Conformity: CE

Standards:

Safety: EN 62368

EMC: EN 55022 / B

EN 61000-4-2

EN 61000-4-3

EN 61000-6-2

EN 61000-6-3

Low Voltage Directive: 2014/35/EU

EMC Directive: 2014/30/EU

MTBF (bei 40°C): 100.000 hours

Protection category: IP20 (EN 60529)

Protection class: 1 Pollution degree: 2

Overvoltage category: II

Environmental properties: 2011/65/EU (RoHS 2), WEEE

Storage temperature: -20°C to +70°C Ambient temperature: +5°C to +50°C

Ambient humidity: 10-95% rel. humidity, non-condensing Operating altitude (max. above mean sea level): 3000 m

Connector lock for C14 and C20 connectors:

1x (further connector locks optional - DK 7979.020)

Covers C13 (optional accessory): DK 7955.010 Covers C19 (optional accessory): DK 7955.015

Warranty: 24 months

Type: Rittal PDU metered+ Model No.: DK 7979.502